WHAT IS CLAIMED IS:

1. A router for automatically generating an IP address comprising a position identifier portion and an interface identifier portion, said router comprising:

a routing table for storing each position identifier portion and information on an output route for the position identifier portion;

a determining unit for determining for each of a plurality of ports whether a position identifier portion is assigned to a network to which the port is connected;

a position identifier portion generating unit for referring to said routing table and generating a position identifier portion different from the position identifier portion registered in said routing table for a port not assigned a position identifier portion;

a routing unit for receiving routing information including a position identifier portion according to a dynamic routing protocol and registering the routing information in said routing table, and registering routing information including the position identifier portion generated by said position identifier portion generating unit in said routing table and notifying another router of the routing information; and

a position identifier portion advertising unit for

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advertising the generated position identifier portion from the port.

2. A router as claimed in claim 1,

wherein said determining unit determines whether a position identifier portion is assigned to the network to which the port is connected on the basis of whether a position identifier portion advertised according to a neighbor discovery protocol for IPv6 is received from said port.

3. A router as claimed in claim 1,

wherein said position identifier portion generating unit generates said position identifier portion by generating a random number.

4. A router as claimed in claim 1,

wherein said position identifier portion generating unit generates said position identifier portion by incrementing a maximum position identifier portion registered in said routing table.

5. A router as claimed in claim 1,

wherein said IP address is an IPv6 aggregatable unicast global address; and

said position identifier portion generating unit generates an SLA value of least significant 16 bits different from SLA values of least significant 16 bits of

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all position identifier portions registered in said
routing table, said position identifier portions having
most significant 48 bits identical with most significant
48 bits assigned to the router, and generates said
position identifier portion by combining the SLA value
with the most significant 48 bits.

6. A router as claimed in claim 1,
wherein said IP address is an IPv6 site-local address;
and

said position identifier portion generating unit
generates a subnet ID of least significant 16 bits
different from subnet IDs of least significant 16 bits of
all position identifier portions registered in said
routing table, said position identifier portions having
most significant 48 bits identical with most significant
48 bits set fixedly, and generates said position
identifier portion by combining the subnet ID with the
most significant 48 bits.

7. A router as claimed in claim 1, further
comprising a routing unit for receiving routing
information including a position identifier portion
according to a dynamic routing protocol and registering
the routing information in said routing table, and
notifying another router of routing information including

the position identifier portion generated by said

position identifier portion generating unit.